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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,681	10/28/2003	Brian Peter Belliveau	202ES057A	3932
37535	7590	05/31/2005	EXAMINER	
NOVEON IP HOLDINGS CORP. 9911 BRECKSVILLE ROAD CLEVELAND, OH 44141-3247			TRAN, THAO T	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 05/31/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,681

Applicant(s)

BELLIVEAU ET AL.

Examiner

Thao T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-22 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) 27-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-22 and 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendments filed 2/22/2005.
2. Claims 1-3, 6-22, 24-36 are currently pending in this application. Claims 4-5 and 23 have been canceled.
3. Claims 27-36 have been withdrawn as directed to a non-elected invention as indicated in the Office action of 10/19/2004.

Claim Objections

4. In view of the prior Office action of 10/19/2004, the objection of claim 19 has been withdrawn due to further consideration.
5. Claim 15 is objected to because of the following informalities: line 4, "dimmer" should be changed to --dimer--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. In view of the prior Office action of 10/19/2004, the rejection of claims 1-3, 6-22, and 26, under 35 U.S.C. 102(e) as being anticipated by Wu (US Pat. 6,392,002), has been withdrawn due to further consideration.

Claim Rejections - 35 USC § 103

7. In view of the prior Office action of 10/19/2004, the rejection of claims 24-25, under 35 U.S.C. 103(a) as being unpatentable over Wu, has been withdrawn due to further consideration.

8. Claims 1-3, 6-22, 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johansen et al. (US Pat. 4,303,457) in view of Wu (US Pat. 6,392,002).

Johansen teaches a core tube comprising two or more layers of the same or different synthetic resins (see col. 3, ln. 42-44). When the layers are of different types of the same resin, such as thermoplastic polyurethane, usually the inner layer comprises hard thermoplastic polyurethane having a Shore hardness of 50-60D, and the outer layer soft thermoplastic polyurethane having a Shore hardness of 80-95A (see abstract; col. 4, ln. 3-15). The thermoplastic polyurethanes are reaction products of a glycol, a diisocyanate, and a diol chain extender. The glycol includes polytetramethylene ether glycol, and the diol chain extender is butane diol (see col. 6, ln. 9-26).

However, Johansen teaches the diisocyanate to be diphenylmethane diisocyanate, which is an aromatic diisocyanate, and not an aliphatic diisocyanate.

Wu teaches a laminate around a hollow core, the laminate having a core, a cover, and at least one intermediate layer; wherein the core, the cover, and the intermediate layer are made of a polyurethane composition (see abstract; col. 7, ln. 15). The polyurethane composition comprises a reaction product of a prepolymer of at least one polyol and at least one polyisocyanate, and a curing agent (see abstract).

Wu further teaches the polyol is polyether polyol, such as polytetramethylene ether glycol, or a polycarbonate polyol; the polyisocyanate is dicyclohexylmethane diisocyanate (see

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col. 7, ln. 33-60); and the curing agent is 1,4-butadiene (see col. 9, ln. 5). The polyol has a molecular weight of about 200 to about 4,000, significantly overlapping the instantly claimed ranges.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have employed the polyurethane reaction products, as taught by Wu, in the layers of Johansen, and would have yielded in the same results. This is because Wu teaches the use of dicyclohexylmethane diisocyanate and diphenylmethane diisocyanate as alternative isocyanates (see col. 7, ln. 36-42). See MPEP 2144.06.

Johansen further teaches the inner layer being about 0.025 in. thick and the outer layer about 0.015 in. thick (see col. 5, ln. 45-50). However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the thickness of a layer would have been determined by routine experimentation, for the purpose of improving softness, resilience, and abrasion resistance of the article. See MPEP 2144.05II.

Response to Arguments

9. Applicant's arguments with respect to claims 1-3, 6-22, and 24-26 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tt
May 25, 2005

A handwritten signature in black ink, appearing to read 'Thao Tran', with a stylized, cursive script.

THAO T. TRAN
PATENT EXAMINER